

Notes from the 08/29/06 MI BPM Upgrade Meeting
Stephen Wolbers
These notes can be found in Beams docDB #1526.

Agenda as announced:

Project announcements - Steve and Bob
MI BPM status list ("punch list") - Dave
p timing - Bob Dysert
53 MHz gains - Bob Dysert
Transition board controller status - Stefano
& Board by board gain control - Stefano
Alarms - Dave, Luciano, Brian
Diagnostic/testing - Marv, Manfred, Peter
Software - Steve, Luciano, Brian
Validation - Rob
AOB

0. Announcements.

- The project should work diligently to complete tasks, ensure proper functionality, etc. The manpower will ramp down as time goes by and we should make good use of the effort available.

- Rob Kutschke was just promoted from Scientist I to Scientist II. Congratulations to Rob. Please work harder!

- A end-of-project lunch will be held, probably at Pal Joey's (their new location) sometime in September. Details are yet to be worked out.

1. MI BPM status list ("punch list") - Dave

- Dave has created a list of functionality required. He went through it at the meeting and his slides can be found in beams-doc-2422. We discussed the list and came up with some ideas of how to attack the list in some systematic way. Bob Webber emphasized that the MI Department and other operations experts will necessarily have to be involved in prioritizing and validating some of the functionality. The project will ensure that the devices perform as designed and adjust to unforeseen problems (e.g. noise) as needed.

- There was a long discussion of injection and extraction FLASH data in 2.5 MHz injection and extraction of pbars from the accumulator to the recycler. There is noise on some BPMs and it confuses the algorithm that determines when the beam enters or leaves the machine. Next week Steve Foulkes can describe in some detail how the algorithm works and we

can as a group discuss possible changes that will provide more "correct" information (from an accelerator point of view).

- There was a lively discussion and clearly shows that there is still work to do and that work needs to be prioritized.

2. p timing - Bob Dysert 53 MHz gains - Bob Dysert

- The relative timing is good. The house delays are set properly for the BES timing signal. It needs to be verified for the MIBS trigger.

- Bob showed some 53 MHz gain measurements. The data shown can be found in beams-doc-2420. The gains that were used are \$3305 for LOW and \$A005 for medium, the relative difference is 17 dB.

- Some suggestions about how to present the data, further measurements to make, etc. were made. Bob W and Bob D will get together and updates will occur next week. In the end a proposal for gains for different beam conditions will be made, similar to the proposal that was made and accepted for pbar gains (see beams-doc-2301).

3. Transition board controller status - Stefano & Board by board gain control - Stefano

- Stefano gave an update on the setting/readback work for the transition boards. There were some unexpected "issues" that needed to be worked around, having to do with address space, etc. These are being worked out and progress continues.

4. Alarms - Dave, Luciano, Brian

- This topic was not covered in the meeting (not enough time). However, Dave did send me his slides and I put them in beams-docdb-2428 for reference.

5. Diagnostic/testing - Marv, Manfred, Peter

- Marv first reported on the 3 BPMs that report significantly shifted (compared to the old system) positions. Equal signals were fed into the transition boards and positions were read out with fast time plot. Two of the three (418 and 634) give expected answers. The third (410) shows a value inconsistent with the survey offset. The Echotek board was changed and the value was unchanged. Investigations continue.

- An updated proposal for diagnostics/test was shown by Marv. It will be added to docdb and people can read it. The proposal is partially based on the NUMI, recycler and rapid transfer application (E42). Once the proposal is available and is finalized the

implementation details will have to be worked out. Marc Mengel is suggested as someone who can help with the implementation based on his past participation in similar efforts.

6. Validation - Rob

- Rob's slides are found in beams-docdb-2421 and beams-docdb-2424. Steve W. had to leave at this time. Please see the slides for detailed information.

7. AOB.

- Weekly meetings will continue. Next meeting Tuesday September 5 at 9:30 A.M. in the Penthouse. This is the day after Labor Day.